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NOTES

CLEARING THE AIR: HOW AN EFFECTIVE TRANSPARENCY POLICY CAN HELP THE U.S. MEET ITS PARIS AGREEMENT PROMISE

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NOTES

CLEARING THE AIR: HOW AN EFFECTIVE TRANSPARENCY POLICY CAN HELP THE U.S. MEET ITS PARIS AGREEMENT PROMISE

*Hannah L. Baldwin**

INTRODUCTION

The dominance of command-and-control regulation in the environmental regulatory scheme has long been criticized as expensive, ineffective, and insensitive to the realities of industry. Despite these critiques, environmental law and policy in the United States has not seen significant reform in the past twenty-five years, resulting in the development of a deeply adversarial system of regulation that often leads to compliance failures. A signatory to the United Nations Framework on Climate Change “Paris Agreement,” the United States has made a renewed commitment to reduce our nation’s contributions of greenhouse gas (GHG) emissions as a part of a global initiative to slow or possibly prevent the potentially catastrophic effects of climate change. The advent of this international agreement, and the establishment of our Nationally Determined Contributions (NDCs) under it, provide an excellent opportunity to re-evaluate the efficacy of our existing framework of regulation, and to consider what might be done to improve industry compliance.

* Candidate for J.D., May 2017, University of Pittsburgh School of Law; B.S., 2012, State University of New York at Buffalo. This Note is dedicated to Sue Tannehill, who first sparked my interest in environmental law and policy; Professor George Taylor, whose instruction provided me with the tools to think critically and creatively about regulation; and to my friends and family who have shown indefatigable support and empathy over these past two and a half years.

This Note argues not that command-and-control regulations in the environmental regulatory scheme should be replaced entirely, but that they may be supplemented through implementing transparency mandates that promote self-regulation. While transparency policies have a wide range of potential application across various regulatory sectors, the focus of this Note is on the utility of those policies in reducing GHGs: particularly, how these policies could be implemented to achieve the levels of reductions promised in the Paris Agreement as a part of reducing our nation's NDCs. By looking at the recent transparency policy implemented by the Securities Exchange Commission (SEC) regarding the sourcing of conflict minerals, this Note suggests that GHG emissions could be curbed through the implementation of a reporting system like that used by the SEC, combined with one of the darlings of the Information Age—a rating system. Combining corporate reporting requirements with an effective rating system has the potential to reward good corporate behavior through a market-based response based on consumer knowledge of those corporations' performance.

Part I provides a brief background on the development of command-and-control regulation and its dominance in American environmental regulatory law. Part II will explain the short-comings of command-and-control regulation, specifically in relation to air pollution and in reducing GHG emissions. Part III introduces a contemporary example of the type of transparency regulation promoted by this Note—the conflict minerals legislation passed as part of the Dodd-Frank finance reform bill (Dodd-Frank). In Part IV, this Note will propose a regulatory structure similar to that put in place through Dodd-Frank, in which companies are required to self-report supply chain data. Part IV will also propose the expansion of the SEC's current climate change disclosures and advocate for a more effective dissemination of the data disclosed, particularly through implementation of a rating program. Part V will discuss current and anticipated challenges to the approach proposed in Part IV.

I. THE DEVELOPMENT AND DOMINANCE OF COMMAND-AND-CONTROL REGULATION IN U.S. ENVIRONMENTAL LAW

The development of regulatory law and the administrative state in the United States began in 1887, with the passage of the Interstate Commerce

Act.¹ The Interstate Commerce Act created the first administrative agency, the Interstate Commerce Commission,² designed to remedy the disproportionate bargaining power railroads had when making contracts with businesses for the shipping of goods.³ Congress set out to regulate this relationship by enacting price-setting measures, mandating that railroads abide by the pricing and reporting guidelines provided in the Act or incur a penalty.⁴ This form of regulatory law—where an actor is given strict instruction and compelled to follow it in the face of a penalty—is commonly known as command-and-control regulation.⁵ In this sense, the strict instruction is the command, and the threat of penalty is the control. As the nation grew, the administrative state grew along with it—experiencing rapid growth in the post-Depression New Deal era and again in the mid-1960s with the addition of energy sector regulation, work place safety initiatives, consumer protections, and environmental regulation.⁶ Now, in 2017, there are over 400 federal administrative agencies in the United States.⁷

Though the administrative state continues to gain influence over private individuals and industry in the United States, some federal agencies have not deviated from the standard command-and-control model of regulation that was first implemented under the Interstate Commerce Act of 1887.⁸ Federal environmental regulations, principally administered through the

¹ Interstate Commerce Act, ch. 104, 24 Stat. 379 (1887) (codified as revised in scattered sections of 49 U.S.C.).

² *Id.* at 383.

³ Edward Rubin, *What's Wrong with Langdell's Method, and What to Do About It*, 60 VAND. L. REV. 609, 617 (2007) (commenting on the passage of the Interstate Commerce Act as the beginning of America's shift toward administrative law and away from common law).

⁴ Interstate Commerce Act, ch. 104, 24 Stat. 379, at 381, 383.

⁵ Today there are dozens of regulatory styles, both theoretical and in practice, but this Note will principally deal with two distinguished modes: command-and-control and transparency policies. *See infra* Part III. Command-and-control regulation has a somewhat nebulous definition. *See* David W. Case, *The Lost Generation: Environmental Regulatory Reform in the Era of Congressional Abdication*, 25 DUKE ENVTL. L. & POL'Y F. 49, 63 (2014); Jodi L. Short, *The Paranoid Style in Regulatory Reform*, 63 HASTINGS L.J. 633, 656 (2012). For the purposes of this Note, command-and-control can most easily be understood as the development of strict standards supported by sanctions.

⁶ STEPHEN BREYER, REGULATION AND ITS REFORM 1 (1982).

⁷ FED. REG., <https://www.federalregister.gov/agencies> (last visited Mar. 6, 2016).

⁸ *But see* John D. Hanson & Kyle D. Logue, *The Costs of Cigarettes: The Economic Case for Ex Post Incentive-Based Regulation*, 107 YALE L.J. 1163, 1174 & n.35 (1998) (stating that there is a trend moving toward economic incentive and market-driven regulations and away from command-and-control, citing numerous supporting arguments in the accompanying footnote).

Environmental Protection Agency (EPA), continue to employ the command-and-control approach in the vast majority of rulemaking since the agency was created in 1970.⁹ Because of the relatively static state of environmental law in the United States,¹⁰ it is often seen as the paradigm of the classic command-and-control model.¹¹

An example of this command-and-control style of regulation under the EPA's current control is air pollution regulation under the Clean Air Act.¹² The EPA sets National Ambient Air Quality Standards (NAAQS) that must be met.¹³ These NAAQS are set for each air pollutant the EPA considers reasonably anticipated to endanger public health or welfare and that results from numerous or diverse mobile (*i.e.* vehicles) or stationary sources (*i.e.* industrial stacks).¹⁴ Regulated entities are required to obtain permits for emitting listed air pollutants and those permits are managed by a state environmental agency through State Implementation Programs (SIP).¹⁵ Once a SIP has been approved, it is administered by the state environmental agency.¹⁶ Even though control is transferred to the state agency, the federal government retains the right to impose sanctions on individuals who violate the federally-approved SIP, or to issue an administrative penalty or file a civil action against any state who fails to enforce the approved SIP.¹⁷ If the SIP fails to achieve the NAAQS attainment goals set by the EPA, or if a state fails to submit a SIP entirely, the EPA Administrator has the right to impose

⁹ See Case, *supra* note 5, at 62–63.

¹⁰ Congress has not passed any major environmental legislation in over twenty-five years. See *id.* at 58–61.

¹¹ See Molly J. Walker Wilson, *A Behavioral Critique of Command-And-Control Environmental Regulation*, 16 FORDHAM ENVTL. L. REV. 223, 223 (2005) (“Since the inception of NEPA [National Environmental Policy Act] more than two decades ago, more specific environmental goals have been set and legislated, giving rise to the command-and-control system of environmental regulation that exists today.”); Short, *supra* note 5, at 684 (stating that over 58% of all scholarly articles written on command-and-control regulation from 1980 to 2005 discussed environmental law specifically, and speculating that its prominence as a topic in command-and-control scholarship was related to environmental regulations’ tendency to regulate processes rather than simply setting targets).

¹² 42 U.S.C.S. §§ 7401–31 (2016).

¹³ *Id.* § 7409.

¹⁴ *Id.* § 7408(a).

¹⁵ *Id.* § 7410.

¹⁶ *Id.*

¹⁷ *Id.* § 7413.

sanctions on the nonattainment areas.¹⁸ These sanctions imposed by the federal government on noncompliant States motivate many State governments to impose sanctions on regulated entities through their own environmental regulatory laws, creating a layered system of command-and-control regulations, and shifting the liability for noncompliance from the State government to the individual polluters.¹⁹

II. WHY COMMAND-AND-CONTROL IS NOT WORKING

There are several rationales that could account for the development and proliferation of command-and-control regulations in environmental regulatory law. For one, pollution is very hard to trace back to a single source—once a particulate or molecular pollutant is released into the air, for example, there is nothing that identifies that pollutant as belonging to a particular source.²⁰ By requiring potential polluters to go through a permitting process, the regulator can assert some control at the source, rather than attempting to trace a particular pollutant back to its origin after it has been emitted.

The permitting process involved in NAAQS is also administratively easier on the regulator—the agency places the burden on the polluter to come up with a comprehensive plan for mitigating emissions (within EPA

¹⁸ Mandatory sanctions are available under the Clean Air Act for noncompliant States and can take two forms, requiring a ratio of at least 2 to 1 emissions reductions within the nonattainment areas for new or modified major facilities and the imposition of highway funding sanctions. 42 U.S.C.S. § 7509(b). Pursuant to § 7410(m), the Administrator also has the authority to impose discretionary sanctions—for example, the Administrator may require compliance in a more flexible timeframe than the 18- and 24-month frameworks available under § 7509. The sequencing for mandatory sanctions in § 7509 can be found in Section 52.31 of title 42 of the Code of Federal Regulations.

¹⁹ See, e.g., Air Pollution Control Act, 35 PA. STAT. § 4009 (West 2016) (Pennsylvania) (providing for civil and criminal penalties for violations of the Act); MASS. GEN. LAWS ANN. ch. 111, § 142A (West 2016) (Massachusetts) (providing for civil and criminal penalties for violations of sections 142B-142M (all related to air pollution)); Pollution Control Act, S.C. CODE ANN. § 48-1-320 (2016) (South Carolina) (providing criminal penalties for willful, grossly negligent or reckless conduct in violation of the Act). But see Texas Clean Air Act, TEX. HEALTH & SAFETY CODE ANN. § 382.085 (West 2015) (mandating that individuals release no “unauthorized emissions,” but not providing for any enforcement mechanism upon failure to comply. Penalties originally provided for under the Act in §§ 382.081 to 382.092 were repealed in 1997). See David Fehling, *Texas Slams EPA Website that Compares State Pollution Enforcement*, STATEIMPACT (July 23, 2014, 6:29 AM), <https://stateimpact.npr.org/texas/2014/07/23/texas-slams-epa-website-that-compares-state-pollution-enforcement/>.

²⁰ Walker Wilson, *supra* note 11, at 235.

guidelines), while the regulatory body needs only to review and decide to either approve or deny the plan.²¹ The development of these plans often requires engineers and other environmental science professionals to perform extensive environmental evaluations, which can be both time consuming and expensive for the preparer, culminating in high compliance costs.²² Keeping these costs with the polluter makes the system of regulation more feasible considering time and man-power constraints of regulatory offices. The importance of keeping certain chemicals out of the air could also be a motivating factor behind the relatively strict controls to which air pollutants are subject. Acute releases of certain toxins can cause dramatic increases in death and illness rates, while prolonged exposure to steady, low-level releases can cause chronic diseases like asthma, emphysema, cancer, or arteriosclerosis.²³ Implementing a market- or incentive-based regulatory scheme when there are lives at stake might be seen as an unnecessary risk.

Command-and-control legislation is certainly not without its critics. Since the 1977 amendments to the Clean Air Act and the establishment of the Environmental Protection Agency (the Act's administering body), the pollution control regulations prescribed by the Act have been widely criticized.²⁴ Professor Jodi Short, in her review of scholarly literature surrounding the concept of command-and-control, identified the five most common criticisms of the regulatory mode: (1) coercive, (2) bureaucratic, (3) costly, (4) legalistic, and (5) ineffective.²⁵ While each critique presents its own challenges to command-and-control regulations, arguably the most troubling from a lawmaker's perspective is the claim that the regulations are ineffective. There are a number of reasons why command-and-control may prove ineffective in certain contexts.

As previously mentioned, the United States' use of the command-and-control regulatory scheme has created an adversarial relationship between

²¹ Rena I. Steinzor, *Reinventing Environmental Regulation: The Dangerous Journey From Command to Self-Control*, 22 HARV. ENVTL. L. REV. 103, 112 (1998).

²² Peter Whoriskey, *Regulations an economic burden to manufacturers, report says*, WASH. POST (Aug. 21, 2012), https://www.washingtonpost.com/business/economy/regulations-an-economic-burden-to-manufacturers-report-says/2012/08/20/3aa4501a-cb01-11e1-9ddc-340d5efb1e9c_story.html?tid=ss_mail.

²³ DANIEL A. FARBER & ROGER W. FINDLEY, ENVTL. LAW IN A NUTSHELL 102 (8th ed. 2010).

²⁴ See Walker Wilson, *supra* note 11; Short, *supra* note 5; Richard B. Stewart, *Economics, Environment, and the Limits of Legal Control*, 9 HARV. ENVTL. L. REV. 1 (1985).

²⁵ Short, *supra* note 5, at 668.

regulators and industry.²⁶ This contentious relationship is related to two of Short's identified critiques—that command-and-control legislation is unnecessarily bureaucratic and coercive. Regulated entities that oppose command-and-control legislation view bureaucrats administering the law as too far removed from the realities of the industry, and resent the intrusion of government into how they operate their businesses.²⁷ This resentment leads to regulatory failure in portions of command-and-control legislation that rely on good faith,²⁸ as well as hostility towards citizen groups and other concerned parties.²⁹ Hostility towards the regulations only increases the likelihood of regulatory violations.³⁰

The problem with abandoning the type of standard-setting rules involved in command-and-control regulation in favor of a market-based approach is rather elemental: the majority of governmental regulations find justification and rationale in the market's failure to control certain behaviors or outcomes.³¹ If the market were capable of controlling pollution levels, regulation would not have been necessary in the first place.³² While deregulation would undoubtedly reduce costs for the regulated parties, there is an exhaustive historical record—not to mention one of the most infamous economic parables³³—supporting the notion that when industry is unburdened by environmental regulation, there is no effective market-check

²⁶ *Id.*

²⁷ *Id.*

²⁸ Since regulators do not have the resources to constantly monitor the behavior of potential polluters, environmental regulation relies on the regulated entities' willingness to abide by the regulations even when the regulator isn't looking, so to speak. *See* Walker Wilson, *supra* note 11, at 233.

²⁹ *Id.* at 237.

³⁰ *Id.* at 232–45.

³¹ BREYER, *supra* note 6, at 7–8.

³² It is uncontroverted that industry had not developed market control for air pollution by the 1970s. Dense, visible smog covered many of the nation's cities and industrial centers, which helped promote passage of the Clean Air Act, the nation's first comprehensive pollution regulation legislation. *Clean Air Act Requirements and History*, EPA, <https://www.epa.gov/clean-air-act-overview/clean-air-act-requirements-and-history> (last updated July 12, 2016). *See also* Jialu Chen, *Photos of Smoggy 1970s America*, MOTHER JONES (Dec. 14, 2011, 5:19 PM), <http://www.motherjones.com/blue-marble/2011/12/smog-photos-1970s-america> (showing photos of smog-covered cities across America from the EPA-commissioned *Documerica* series, which ran from 1971 until 1977).

³³ *See* Garrett Hardin, *The Tragedy of the Commons*, SCIENCE MAGAZINE (Dec. 13, 1968), <http://science.sciencemag.org/content/sci/162/3859/1243.full.pdf>.

to prevent polluters from externalizing the costs of production,³⁴ creating ruinous societal costs.³⁵ While the cost might be a burden for industry, recent studies have shown that the benefits to society that result from industry regulation greatly outweigh the costs imposed on industry.³⁶

Although, based on these authorities and common sense, it seems unlikely that deregulation of air emissions would lead to any reduction in air pollution, the current system of command-and-control regulation is not perfect. Because many regulated parties view pollution regulations as a production cost, some become “amoral calculators,” choosing to increase their profit by violating the law when the benefits of violation will exceed whatever penalties they might incur if a regulator were to catch them.³⁷ One solution to the amoral calculators problem could be to increase the penalties imposed on actors who exceed their permit limitations or to provide particularly stringent penalties for willful violations, effectively raising the

³⁴ An externalized cost is a cost related to an individual's action that is not borne by that individual, but is borne by another individual, group, or society as a whole. Market-based regulations are only effective when the costs remain with the polluter—when the costs of pollution are not borne by the polluter, there is little incentive to devote resources to curbing pollution. FARBER & FINDLEY, *supra* note 23, at 93.

³⁵ Societal costs of pollution include increased healthcare costs, damage to commercial crops, and ecological remediation and clean-up costs among many others. See Mary Vaiana, *Cost and Health Consequences of Air Pollution in California*, RAND HEALTH (2010), http://www.rand.org/pubs/research_briefs/RB9501/index1.html (last visited Mar. 6, 2016) (stating that failing to meet federal air quality standards led to nearly 30,000 hospitalizations in California from 2005 to 2007). See also Douglas M. Costle, *Control Benefits Exceed Costs*, 4 EPA J. 26, 26 (1978) (stating that pollutants can be dangerous not only to human health, but may cause property damage, disrupt fisheries, and reduce crop yields—citing specifically to West Coast grape yield reductions of as much as 60 percent which researchers found were related to industrial smog); Walter Gellhorn, *Deregulation: Delight or Delusion?*, 24 ST. LOUIS U. L.J. 469, 473–75 (1980) (arguing that the cost of regulation is often less than the cost of remediation (clean-up), pointing to the cited environmental disasters as illustrative of the common industry attitude that “what is not forbidden is regarded as permitted”).

³⁶ According to the Office of Management and Budget, from fiscal years 2001 to 2011, major federal regulations provided annual benefits totaling between \$141 and \$691 billion and had estimated annual costs of only \$42.4 billion to \$66.3 billion, with EPA regulations accounting for 60 to 82% of the benefits and 43 to 53% of the costs. U.S. GOV'T ACCOUNTABILITY OFF., GAO-14-519, ENVIRONMENTAL REGULATION: EPA SHOULD IMPROVE ADHERENCE TO GUIDELINES FOR SELECTED ELEMENTS OF REGULATORY ANALYSES (2014). But see E. Donald Elliott, *Recipe for Industrial Policy: Blending Environmentalism and International Competitiveness*, 19 CAN.-U.S. L.J. 305, 308 (1993) (noting that the benefits of environmental regulation can be difficult to quantify, resulting in difficulty applying a cost-benefit analysis).

³⁷ Jodi Short & Michael W. Toffel, *Making Self-Regulation More Than Merely Symbolic: The Critical Role of the Legal Environment*, 55 ADMIN. SCI. Q. 361–69 (2010).

penalties to such a rate that would make it economically unfavorable to pollute and pay the fine rather than comply with the regulations. There are several issues with this solution, however. The first problem with increasing penalties lies in the disparity between the benefits of regulatory compliance and the industry costs in complying—polluting the air is not an act easily undone.³⁸ Carbon dioxide emitted from the first plant built during the Industrial Revolution at the turn of the nineteenth century still exists in the atmosphere today.³⁹ Increasing penalties may change some polluters' behavior, but others will likely continue their illegal polluting practices, hoping regulators will not discover their unlawful actions.

Additionally, increasing fines does not address the inherent difficulties in detecting the violations. Many air pollutants are not easily detected (carbon monoxide, for example, is colorless, odorless, and deadly), and determining whether or not a particular plant is in compliance would require access to the plant, which would in turn require notice of impending inspection, giving polluters the opportunity to come into compliance before the inspectors arrive.⁴⁰

There is also, of course, the usual administrative plague of growing regulatory demands and shrinking regulatory budgets, leading to delayed and/or ineffective enforcement by the regulatory agency.⁴¹ The number of facilities and the diversity of responsibilities most environmental regulators are assigned make it logistically impossible for comprehensive monitoring to occur at every site, so the regulators often rely on self-reported disclosures.⁴² Self-reporting could lead to companies' failure to follow proper disclosure requirements, to unwitting misreporting, or to intentionally misleading regulators by reporting false information.⁴³

³⁸ See sources cited *supra* note 35.

³⁹ Mason Inman, *Carbon is Forever*, NATURE (Nov. 20, 2008), <http://www.nature.com/climate/2008/0812/full/climate.2008.122.html>.

⁴⁰ Walker Wilson, *supra* note 11, at 237.

⁴¹ Short & Toffel, *supra* note 37.

⁴² Walker Wilson, *supra* note 11, at 239.

⁴³ The Tonawanda Coke plant near Niagara Falls, New York is a contemporary and incredibly poignant example of this type of intentional violation. Tonawanda Coke's chief environmental compliance officer was found to have intentionally underreported emissions of benzene, formaldehyde, and other harmful chemicals that went undetected for years before regulators issued an injunction against the plant. Elizabeth Shogren, Sandra Bartlett & Kristen Lombardi, *N.Y. Plant's Neighbors Expose Regulatory Gaps*, NAT'L PUB. RADIO (Nov. 14, 2011), <http://www.npr.org/2011/11/10/142189390/tonawanda-provides->

Where Do We Go From Here?

While it is true that regulated parties are often motivated by profit, it is unfair and inaccurate to claim that money is the only motivating factor behind industry action. Most companies, in addition to concern for the continued profitability of their business, are concerned with the creation and maintenance of a corporate identity (though the two are not necessarily entirely severable).⁴⁴ There are also moral considerations that contribute to a desired company culture and environmental or social responsibility policies.⁴⁵ By combining these two driving forces—developing a positive corporate identity and maximizing firm profits—transparency policies, like conflict minerals legislation, can supplement existing regulations by providing the benefit of building a positive corporate identity when companies comply with regulations. Requiring disclosure could allow the EPA and state regulators to relax pre-emission permitting requirements, giving the industry more flexibility to develop new methods of pollution control while still receiving detailed reports on industry compliance at the expense of the regulated party. The conflict minerals legislation provides an excellent example of a contemporary implementation of a mandated reporting transparency policy like the one that this Note proposes be used to supplement existing GHG emissions regulations.

III. SUPPLY CHAIN REGULATION THROUGH SEC CORPORATE FINANCIAL FILINGS—THE CONFLICT MINERALS LEGISLATION OF DODD-FRANK

The Dodd-Frank Wall Street Reform and Consumer Protection Act (“Dodd-Frank” or “the Act”) was signed into law by President Obama on July 21, 2010.⁴⁶ Touted as an answer to many of the problems that lead to the Great Recession, the Act sought “to promote financial stability in the United States, by improving accountability and transparency in the financial system,

lessons-for-fighting-toxic-air. During those years, several residents had complained illnesses ranging from breathing problems to rashes, cancer, and infertility. *Id.* When asked about the agency’s failure to detect and investigate the emissions sooner, the New York State Department of Environmental Conservation commissioner blamed the department’s failure to discover the violations on a lack of sophisticated equipment and the elusive nature of toxic pollutants. *Id.*

⁴⁴ Short & Toffel, *supra* note 37, at 365–66.

⁴⁵ *Id.*

⁴⁶ Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203 (2010).

to end ‘too big to fail,’ to protect the American taxpayer by ending bailouts, to protect consumers from abusive financial services practices, . . .” and, as noted at the end of this non-exhaustive list of goals, the Act was also to be used for “other purposes.”⁴⁷ The Act spans an expansive 2,300 pages and touches ten different regulatory agencies, dealing mostly with supervision and regulation of financial institutions.⁴⁸ The subject of this Note, however, falls under the “other purposes” category: the regulation of the use of “conflict minerals” in consumer products.⁴⁹

Section 1502 of Dodd-Frank⁵⁰ was added to the bill under Section 15, titled “Miscellaneous Provisions.”⁵¹ Predictably, the conflict minerals regulations were originally introduced by Senators Feingold, Durbin, and Brownbank as a separate bill, titled “Congo Conflict Minerals Act,” S. 891,⁵² but, unsuccessful on its own, the senators ultimately instead decided to propose the bill’s provisions as an amendment to Dodd-Frank. The conflict minerals language, after review by industry representatives, government agencies, and the Banking Committee, was added to the fourth draft of the bill on May 20, 2010, and eventually passed with the rest of the Act in July.⁵³

The conflict minerals legislation established a basis for the SEC to create a mandatory supply-chain reporting scheme for publicly traded companies that use conflict minerals in their products.⁵⁴ That scheme would, in turn, encourage companies to source the minerals outside of the Democratic Republic of Congo (DRC) and neighboring countries (the “Covered Countries”), where the trade of such minerals contributes to the

⁴⁷ 111 P.L. 203, Part 1 of 3, 124 Stat. 1376, 1377 (2010).

⁴⁸ William Sweet, *Dodd Frank Act Becomes Law*, Harvard Law School Forum on Corporate Governance and Financial Regulation (July 21, 2010), <https://corpgov.law.harvard.edu/2010/07/21/dodd-frank-act-becomes-law/>.

⁴⁹ “Conflict minerals” as defined in the Act, include columbite-tantalite (coltan), cassiterite (tin), gold, wolframite (tungsten), or their derivatives; or any other mineral or its derivatives determined by the Secretary of State to be financing conflict in the Democratic Republic of Congo or any adjoining country. 111 P.L. 203, Part 3 of 3, 124 Stat. 1376, 2218. These minerals are used in a variety of products, but perhaps most prominently and irreplaceably in consumer electronics like laptops, cellphones, and mp3 players. See Elizabeth Dias, *First Blood Diamonds, Now Blood Computers?*, TIME MAGAZINE (July 24, 2009), <http://content.time.com/time/world/article/0,8599,1912594,00.html>.

⁵⁰ Now codified at 15 U.S.C.S. § 78m(p) (2016).

⁵¹ 111 P.L. 203, Part 3 of 3, 124 Stat. 1376, 2213.

⁵² 156 CONG. REC. S.3965-03 (daily ed. May 19, 2010) (statement of Sen. Feingold).

⁵³ H.R. 4173, 111th Cong. (2009).

⁵⁴ Sweet, *supra* note 48.

growing humanitarian crisis stemming from ongoing civil war in the region.⁵⁵ The legislation included in Dodd-Frank requires companies to disclose and make public annually if the minerals in their products originate or may have originated in the DRC or neighboring countries, and to provide information on due diligence and on source and chain of custody to the SEC, but did not provide for any sanctions for companies whose reports showed continued use of conflict minerals.⁵⁶

The idea behind the mandatory reporting scheme developed through Section 1502 and subsequent SEC regulations was to increase transparency in the sourcing of conflict minerals, in hopes that American consumers and investors could make more informed decisions based on the companies' ethical practices, presumably favoring companies who avoided sourcing the minerals from areas in conflict over those that did not.⁵⁷ This type of legislation is known as a transparency policy. According to The Transparency Policy Project—an initiative seeking to improve and expand the use of transparency policies—a transparency policy is a “public requirement[] that corporations or other organizations disclose factual information to reduce public risks that those organizations create or flaws in their performance.”⁵⁸ Transparency policies, unlike traditional command-and-control legislation, rely on market forces to compel companies to behave ethically, rather than relying on the imposition of fines or other disciplinary actions administered by the government. While this type of nationally-mandated disclosure program is not entirely novel,⁵⁹ it is the first of its type to be implemented by the SEC with regard to consumer products.

⁵⁵ *Id.* For more information about the trade of conflict minerals in the region and how they contribute to the humanitarian crisis in the DRC, see Jeffery Gettleman, *The Price of Precious*, NAT'L GEOGRAPHIC (Oct. 2013), <http://ngm.nationalgeographic.com/2013/10/conflict-minerals/gettleman-text>.

⁵⁶ 15 U.S.C.S. § 78m(p).

⁵⁷ See 156 CONG. REC. S.3976 (daily ed. May 19, 2010) (Statement of Sen. Feingold).

⁵⁸ Harvard Kennedy School Ash Center for Democratic Governance and Innovation, *What are transparency policies?*, THE TRANSPARENCY POLICY PROJECT, <http://www.transparencypolicy.net/FAQs.php> (last visited Nov. 22, 2016) [hereinafter The Transparency Policy Project].

⁵⁹ See 42 U.S.C.S. § 11023 (2016) (an aggregation of mandated reporting by industries using certain quantities of toxic chemicals under the Emergency Planning and Community Right-To-Know Act); OSHA Hazardous Communication Guidelines, 29 C.F.R. § 1910.1200 (2013) (resulting in the proliferation of Material Safety Data Sheets, requiring employers to provide certain information to employees regarding hazardous chemicals they may interact with while working).

Successes and Shortcomings of the Conflict Minerals Regulations

The conflict minerals guidelines included in Dodd-Frank remain somewhat controversial and results have been slow to show.⁶⁰ The SEC regulations required that companies' first reports be filed by June 1, 2014, and according to a Government Office of Accountability report released in August of 2015 (hereinafter referred to as "the Report"), most companies were unable to determine the source of their conflict minerals, claiming that the information was too difficult to obtain from their suppliers.⁶¹ So, the resulting disclosures of companies practicing due diligence in accordance with the SEC regulations were limited because the majority of companies surveyed in the Report maintained that they could not determine the origin of the minerals in their supply chains.⁶² Even though the goals of promoting transparency to the consumer and investors may not have been fully realized due to insufficiencies in reporting mechanisms, there is tangible evidence to show that the legislation had the intended effect of drastically reducing minerals sourced from the DRC or neighboring countries, which lead to the creation of "green mines" that had been freed from armed rule in the Covered Countries and prompting the government in those countries to work with the United States to assure trade from these mines would not fuel violence.⁶³

It may be too soon to place the label of "success" on the Dodd-Frank conflict minerals regulations, but reports from NGOs largely praising the

⁶⁰ See Nat'l Ass'n of Mfrs. v. Sec. Exch. Comm'n, 800 F.3d 518, 556 (D.C. Cir. 2015) (declaring that portions of the statute requiring regulated entities to identify their products as not "DRC conflict free" were violations of the First Amendment). As Attorney General Loretta Lynch pointed out in a letter to Speaker of the House Paul Ryan following the SEC's decision not to appeal the court's decision, however, the opinion can be read to invalidate only the SEC's rule regarding the particular designation of products as "not DRC conflict free," and not to affect the validity of Section 1502 of the Dodd-Frank Act. See Letter from Loretta Lynch, United States Attorney General, to Paul Ryan, Speaker of the House (Mar. 4, 2016), <https://www.justice.gov/oip/foia-library/osg-530d-letters/3-4-2016.pdf/download>. Therefore, the case may prove to have little impact on the validity of the statute, and only a small effect on the SEC's promulgated regulations.

⁶¹ U.S. GOV'T ACCOUNTABILITY OFF., GAO-15-561, SEC CONFLICT MINERALS RULE 15-16 (2015).

⁶² *Id.* at 18.

⁶³ *Id.* at 35; see also AMNESTY INT'L, WORLD REPORT 2015–2016: THE STATE OF THE WORLD'S HUMAN RIGHTS (2015–2016), <https://www.amnestyusa.org/sites/default/files/pol1025522016english.pdf>; Fidel Bafilemba, Timo Mueller & Sasha Lezhnev, *The Impact of Dodd-Frank and Conflict Minerals Reforms on Eastern Congo's Conflict*, ENOUGHPROJECT 1 (June 2014), <http://www.enoughproject.org/files/Enough%20Project%20-%20The%20Impact%20of%20Dodd-Frank%20and%20Conflict%20Minerals%20Reforms%20on%20Eastern%20Congo%E2%80%99s%20Conflict%2010June2014.pdf>.

effects the law has had in the region provide enough evidence that the policies have effected positive changes in the region, even if the reporting has not been as effective as Congress envisioned when it passed the bill.

VI. THE PARIS AGREEMENT AND NATIONAL COMMITMENTS TO CLIMATE CHANGE MITIGATION—WHY TRANSPARENCY POLICIES COULD WORK NOW

On December 12, 2015, President Obama signed the United Nations Framework on Climate Change's Paris Agreement, committing to implement policies within the United States designed to hold the increase of global temperature rise to two degrees Celsius.⁶⁴ In order to achieve that goal, each signing country is required to develop Nationally Determined Contributions to serve as an outline for implementing required GHG emissions policy changes.⁶⁵ The United States took an understandably broad approach to its NDC submission, projecting an economy-wide target of reducing GHG emissions by 26–28% below 2005 levels, making best efforts to reach a 28% reduction by 2025.⁶⁶ While these numbers are not particularly ambitious,⁶⁷ GHG emissions regulations have an embattled history in the United States, partially due to the persistence of “climate deniers” holding seats in Congress,⁶⁸ so it is likely that any traditional environmental regulatory reform aimed at controlling industry's GHG emissions will not find an easy path to passage.⁶⁹

⁶⁴ G.A. Res. 1/CP.21, at 2, The Paris Agreement (Dec. 12, 2015).

⁶⁵ *Id.* at 3.

⁶⁶ U.N. Framework Convention on Climate Change, *U.S. Cover Note, INDC and Accompanying Information*, INDCS AS COMMUNICATED BY PARTIES (Mar. 31, 2015), <http://www4.unfccc.int/submissions/INDC/Published%20Documents/United%20States%20of%20America/1/U.S.%20Cover%20Note%20INDC%20and%20Accompanying%20Information.pdf>.

⁶⁷ Fiona Harvey & Suzanne Goldenberg, *US Pledges emissions cuts of up to 28% ahead of global climate treaty*, THE GUARDIAN (Mar. 31, 2015), <http://www.theguardian.com/environment/2015/mar/31/us-set-to-propose-emissions-cuts-of-28-ahead-of-global-climate-treaty> (the current U.S. targets represent only a 10% decrease from 1990 levels, which were traditionally the reference point in United Nations Climate Reports).

⁶⁸ Tom McCarthy, *Meet the Republicans in Congress who don't believe climate change is real*, THE GUARDIAN (Nov. 17, 2014), <http://www.theguardian.com/environment/2014/nov/17/climate-change-denial-scepticism-republicans-congress>.

⁶⁹ See *Massachusetts v. Envtl. Prot. Agency*, 549 U.S. 497 (2007) (a 5–4 decision that the EPA was mandated to regulate GHGs as air pollutants after the EPA commissioner under the Bush Administration declined to promulgate rules regarding GHGs); see also Jonathan H. Alder, *Supreme Court Puts the*

The Paris Agreement represents our nation's global commitment to stop the potentially catastrophic events that may result with an average global temperature increase of two degrees Celsius. It has long been recognized that developing countries, especially island nations, stand to lose the most as a result of warming.⁷⁰ At the current rate of warming, and if trends continue, the Maldives, a small island nation in the Indian Ocean, will be completely submerged.⁷¹ This result is not only tragic for the people of the Maldives that will become a stateless nation if this warming continues, but it also implicates western, developed nations. The United States has been emitting GHGs into the atmosphere in prodigious proportions for the past 200 years, arguably contributing the most out of any country in the world to anthropogenic warming.⁷² Because of our wealth and the sheer land mass of the United States, however, we who contributed the most and who have benefited the most from the emissions of GHGs into the atmosphere will be largely insulated from the early effects of climate change.⁷³

The press and media coverage surrounding the Paris Agreement also signifies a change in social awareness and interest in climate change policy among citizens.⁷⁴ While the United States as a nation still remains among the most skeptical about climate change,⁷⁵ studies show that the majority of

Brakes on the EPA's Clean Power Plan, WASH. POST (Feb. 9, 2016), <https://www.washingtonpost.com/news/volokh-conspiracy/wp/2016/02/09/supreme-court-puts-the-brakes-on-the-epas-clean-power-plan/>.

⁷⁰ Kennedy Warne, *Will Pacific Island Nations Disappear as Seas Rise? Maybe Not*, NAT'L GEOGRAPHIC (Feb. 13, 2015), <http://news.nationalgeographic.com/2015/02/150213-tuvalu-sopoaga-kench-kiribati-maldives-cyclone-marshall-islands/>.

⁷¹ Mark Phillips, *Visit the Maldives, Before They Disappear*, CBS NEWS (Dec. 7, 2009, 1:58 PM), <http://www.cbsnews.com/news/visit-the-maldives-before-they-disappear/>.

⁷² Bill Blakemore, *Who's 'Most to Blame' for Global Warming?*, ABC NEWS (July 22, 2012), <http://abcnews.go.com/blogs/technology/2012/07/whos-most-to-blame-for-global-warming/>.

⁷³ *A bad climate for development*, THE ECONOMIST (Sept. 17, 2009), <http://www.economist.com/node/14447171> (stating that developing countries are more vulnerable to the effects of climate change due to factors such as inadequate housing, poor health and healthcare, increased likelihood of contracting life threatening diseases, and the devastating effects that environmental disasters have on tourism and farming, upon which many developing economies depend).

⁷⁴ Sonya Gurwitt & Timmons Roberts, *The Paris climate talks according to U.S. print media: Plenty of heat, but not so much light*, THE BROOKINGS INST. (Dec. 18, 2015), <http://www.brookings.edu/blogs/planetpolicy/posts/2015/12/18-cop21-paris-climate-talks-us-print-media-roberts> (stating that 424 articles were published about the Paris climate talks by *The New York Times*, *The Wall Street Journal*, *Los Angeles Times*, and *USA Today* over the course of two weeks).

⁷⁵ *Where in the World Is Climate Change Denial Most Prevalent?*, N.Y. TIMES (Dec. 11, 2015), <http://www.nytimes.com/interactive/projects/cp/climate/2015-paris-climate-talks/where-in-the-world-is->

Americans agree with regulating GHGs in an effort to curb the effects of climate change, a change in opinion that has increased steadily over the past nine years.⁷⁶ This increase in public engagement with climate change issues is essential to the success of a potential transparency policy. Concerns about climate change will hopefully motivate American consumers to consider the environmental policies of companies before patronizing them or investing in them. Such concerns might also motivate companies to make efforts to reduce GHG emissions in anticipation of the market favoring more ethical practices, just as companies did in response to the conflict minerals legislation.

There are some inherent parallels between the humanitarian concern driving Congress to pass the conflict minerals legislation and the potential introduction of GHG supply chain emissions regulations. The conflict minerals legislation was passed in recognition of American companies' contributions to the on-going civil war in the DRC.⁷⁷ Since the United States cannot exert direct control over the way minerals are mined in foreign states, it instead opted to construct a framework of reporting that incentivized companies to ethically source the minerals. In the context of GHG emissions, mandated GHG emissions reporting for all companies whose production processes meet a certain threshold could not only be a solution to the current regulatory rut in environmental policy, but could also act as a check on American business owners acting with global consequences when they release GHGs into the atmosphere. Congress can separate supply chain GHG regulations from traditional environmental command-and-control legislation and take them out of the adversarial context by regulating them under the SEC.

Apart from the humanitarian purposes of reducing the United States' emissions of GHGs which are parallel to the goals of the conflict minerals rules, there is another compelling connection between climate change and the

climate-denial-most-prevalent (stating that the United States had more climate deniers respond in the twenty-country survey than any other).

⁷⁶ See *A bad climate for development*, *supra* note 73 (referencing the Global Trends Report published by Ipsos Mori in 2014, which reported that 54% of Americans agree that climate change is largely a result of human activity). See also Fredrick Mayer, Sarah Adair & Alex Pfaff, *Americans Think the Climate is Changing and Support Some Actions*, DUKE UNIV. (Feb. 2013), https://nicholasinstitute.duke.edu/sites/default/files/publications/ni_pb_13-01_0.pdf.

⁷⁷ See 156 CONG. REC. S.3965-03 (daily ed. May 19, 2010) (statement of Sen. Feingold).

SEC. The mission of the SEC is to “protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation.”⁷⁸ An integral part of this mission is to provide investors with financial reports and other information through requiring publicly traded companies to make this data public.⁷⁹ Recognizing the potential liabilities companies assume when engaging in certain environmentally “dirty” activities, the SEC began requiring United States companies to disclose environmental data related to estimated future costs for hazardous waste clean-up and environmental lawsuits involving fines exceeding \$100,000.⁸⁰ It is now becoming increasingly evident that the companies will soon start to feel the financial effects of climate change affecting their bottom lines, as well.⁸¹ There is currently a push by New York State Attorney General Eric Schneiderman and members of Congress to investigate Exxon Mobil for lying to the public and investors about the risks of climate change based on their own internal reports.⁸²

V. TYPES OF TRANSPARENCY POLICIES AND WHAT WOULD WORK FOR GHG EMISSIONS

As mentioned above, the conflict minerals legislation in Dodd-Frank employs a legislative approach known as a transparency policy.⁸³ The goal of a transparency policy as a regulatory mode is to promote self-regulation

⁷⁸ *What We Do*, SEC.GOV, <https://www.sec.gov/about/whatwedo.shtml> (last visited Sept. 14, 2016).

⁷⁹ *Id.*

⁸⁰ *Remarks of Richard Y. Roberts: Overview of Environmental Liability Disclosure Requirements, Recent Developments and Materiality*, SEC.GOV (Aug. 9, 1993), <https://www.sec.gov/news/speech/1993/080993roberts.pdf>.

⁸¹ Costs related to climate change can be related to an increase in weather disasters, effects of new state and federal regulations sparked by international commitments like the Paris Agreement, and other insurance and liability that can evolve from climate change policy. Jim Coburn & Jackie Cook, *Cool Response: The SEC and Corporate Climate Change Reporting*, CERES (Feb. 2013), <https://www.ceres.org/resources/reports/cool-response-the-sec-corporate-climate-change-reporting/>.

⁸² Letters from Congress Members to Energy Companies (Dec. 7, 2015), <https://www.documentcloud.org/documents/2644319-Lieu-Letter.html>; *A Range of Opinions on Climate Change at Exxon Mobil*, N.Y. TIMES (Nov. 6, 2015), <http://www.nytimes.com/interactive/2015/11/06/science/exxon-mobil-global-warming-statements-climate-change.html>.

⁸³ See discussion *supra* Part III.

within regulated entities through the dissemination of data.⁸⁴ By requiring the entities to provide detailed information regarding their practices without prescribing a certain way to carry out those practices and without imposing sanctions if entities fail to comply with any agency-set goal, companies have more flexibility to comply with standards set by either the government or by other industry leaders. While the government may still have a role in setting standards, by removing penalties and sanctions that often accompany noncompliance with environmental regulation, much of the adversarial character of the relationship between regulator and regulated entity dissipates.

There are several different approaches to implementing a transparency policy.⁸⁵ This Note promotes extending the same nationally mandated disclosure approach employed by lawmakers in the conflict minerals legislation to the context of GHG supply chain reporting. Nationally mandated disclosure simply requires that all entities falling within the bounds of the legislation disclose certain information. In the case of the conflict minerals legislation, that information was related to supply chains.

The SEC currently requires large emitters of GHGs to report emissions data through the Greenhouse Gas Reporting Program, which came into effect on September 10, 2010.⁸⁶ This transparency policy is similar to the conflicts mineral legislation in that it requires the large majority of industry actors⁸⁷ to disclose information related to their internal activity.⁸⁸ Where the two differ, unfortunately, is with the efficacy of the two policies. While both policies, like many other transparency policies, are plagued by inefficient data dissemination,⁸⁹ the amount and scope of the data collected by SEC regarding GHG emissions is far more unwieldy to the average consumer. The reason

⁸⁴ See STEVEN LYDENBERG, CORPORATIONS AND THE PUBLIC INTEREST: GUIDING THE INVISIBLE HAND 57 (2005).

⁸⁵ There are four distinct approaches to achieving industry transparency: international standards for disclosure, nationally mandated disclosure, disaggregated data, and voluntary individualized company disclosure. For an in-depth discussion of these different strategies and examples of organizations that have implemented them, see *id.* at 57–77.

⁸⁶ 40 C.F.R. Part 98.

⁸⁷ The agriculture and land use sectors, certain fossil fuel suppliers, and smaller emitters are excluded from reporting data under the rule. *Fact Sheet—Greenhouse Gases Reporting Program Implementation*, EPA.GOV (Nov. 2013), <https://www.epa.gov/sites/production/files/2014-09/documents/ghgrp-overview-factsheet.pdf>.

⁸⁸ 40 C.F.R. § 98.3.

⁸⁹ See LYDENBERG, *supra* note 84, at 68.

this has disproportionately affected the efficacy of the GHG data is that companies regulated under the conflicts minerals legislation seem to have taken action as a result of the publication of their supply chain data, while GHG emitters have not.

One possible explanation for this marked difference between the effects on industry that these two policies have had is that the conflicts minerals legislation has a more dichotomous reporting result—either you are sourcing minerals from countries in conflict or you are not—while the supply chain data that is required through the regulation is somewhat more nuanced, the ultimate finding is easy to understand. The GHG emissions reporting, however, while relatively easy to navigate through the EPA’s reporting website, reports the metric tons of the required GHGs emitted by each regulated facility.⁹⁰ Even assuming a consumer would take the initiative to find the appropriate EPA website, look up the specific regulated entity, and read the reported data, there is no point of reference from which to compare the entities’ emissions. There is no indication of rating or approval attached to the data, so the availability of this raw data to the public has very little force.⁹¹

So how can the United States improve its current GHG transparency policies to drive the market towards a greener and more sustainable future? Add a rating program. Ratings systems are wildly popular across multiple sectors in private industry and can have a profound effect on the choices individuals make.⁹² A rating program organizes and compiles raw data, like the data on emissions from the EPA, and provides comparisons, allowing consumers to digest the information in a much simpler way. Rating agencies provide simple, accessible information for stockholders and consumers about regulated entities’ performance, giving meaning to the metric tons released by putting them in the larger industry context.⁹³ A rating system or organization could be established through a government program,⁹⁴ which

⁹⁰ See, e.g., Scrubgrass Generating Plant, <http://ghgdata.epa.gov/ghgp/service/facilityDetail/2014?id=1001256&ds=E&et=&popup=true> (last visited Nov. 20, 2016).

⁹¹ See LYDENBERG, *supra* note 84, at 68.

⁹² See Eleanor Barkhorn, *College Rankings Really Do Influence Which Schools Students Apply To* (Jan. 17, 2014), <http://www.theatlantic.com/education/archive/2014/01/college-rankings-really-do-influence-which-schools-students-apply-to/283151/>.

⁹³ See LYDENBERG, *supra* note 84, at 88.

⁹⁴ Compare to the EPA’s current “Energy Star” program. See ENERGY STAR, <https://www.energystar.gov/about> (last visited Nov. 20, 2016).

could provide a centralized data hub that allows consumers easy access to the reporters' compliance information.

VI. POTENTIAL CHALLENGES TO TRANSPARENCY POLICIES AND RATING SYSTEMS IN CLIMATE CHANGE MITIGATION

Because mandated reporting does not impose any sanctions on regulated entities for failing to meet a regulatory standard, it is essential to any successful transparency policy that the information disclosed by the regulated parties has value to consumers.⁹⁵ If consumers are not interested in the size of a particular good's GHG footprint, then they will continue to choose products based on other factors, such as price. Without the market shift towards goods that are produced with lower emissions, the transparency policies will have no influence on lowering GHG emissions. It is clear from the current state of SEC transparency reporting that the market is still incapable, at this stage, of regulating GHG emissions reductions to the levels we need to reach to meet our Paris Agreement commitments. Therefore, we are not in a position to remove command-and-control regulations that are in place to prevent unacceptably high costs on society. While this market-mobilization is a challenge, through the implementation of data dissemination policies like rating systems that provide consumers with easily accessible information about an entity's performance, transparency policies could play a much bigger role in the regulation of GHGs in the future.

There are also problems inherent to transparency policies generally. The data provided to the government through mandated reporting is self-reported data, and companies have numerous motivations to falsify that data, especially if they feel that the impact of a poor rating through a government or independent auditing rating system could negatively impact their public image or their profits.⁹⁶ The recent exposure of the Volkswagen emissions reporting scandal is an excellent example of this possibility.⁹⁷ In order to ensure that companies are reporting emissions honestly, extensive auditing of the reporting process must be carried out. This type of monitoring would

⁹⁵ The Transparency Policy Project, *supra* note 58.

⁹⁶ See Short *supra* note 5, at 364.

⁹⁷ Volkswagen cheated emissions testing on its line of "clean diesel" vehicles by changing car performance standards during testing and during actual vehicle operation on the road. For a more detailed explanation of the emissions cheating scandal, see Russell Hotten, *Volkswagen: The scandal explained*, BBC NEWS (Dec. 10, 2015), <http://www.bbc.com/news/business-34324772>.

most likely prove cost-prohibitive for regulators, who would have to engage in a series of randomized auditing to reduce costs, increasing the likelihood that false reporting goes unnoticed.

Ratings systems can also create comparisons that are over-simplified if large amounts of time and resources are not put into their development and dissemination. Ratings systems have the potential to ignore differences between types of regulated entities, giving the appearance of better or worse performance based on arbitrary factors such as the nature of the industry the entity is a part of or the size or scope of the entity's activities. These systems may also be susceptible to First Amendment challenges like the conflict minerals legislation issue in the *National Association of Manufacturers v. Securities Exchange Commission* case—industry would likely resist mandatory labeling of their performance as unsatisfactory.

CONCLUSION

With the 2025 deadlines of our NDCs looming, it is time to engage all GHG emitting industries in an effort to create new legislation with which regulators, consumers, and regulated entities can work. While there is still a need for some command-and-control regulations where air pollutants such as GHGs are involved in order to protect public health, imposing penalties on emitters for noncompliance could become increasingly rare as polluters are motivated by market forces resulting from improved transparency and data dissemination policies implemented and enforced by the SEC and EPA in tandem. A shift from the adversarial nature of environmental regulation will likely improve compliance and motivate regulated parties to engage with regulators rather than resist them.